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ABSTRACT

The enrollment patterns of Chicanos in colleges and universities of the Southwest were examined for 1972, 1974, and 1976, and enrollment patterns were compared to graduation data for Chicanos for the academic year 1975-76. Comparative data for whites and blacks were also examined. The primary sources of data were the compliance surveys conducted by the U.S. Office for Civil Rights. The analysis was conducted for Arizona, California, Colorado, New Mexico, and Texas. It was found that Chicanos are underrepresented in colleges and universities of the southwest and that they are less well represented than either blacks or whites. Chicanos were much more likely than whites, and slightly more likely than blacks, to enroll in two-year colleges. Chicanos' share of bachelor degrees were conferred in proportion to their enrollment in the undergraduate upper levels. Chicanos are least well represented in the major research universities that grant the doctorate. Implications of the findings to the issue of equal access to higher education are considered. Additionally, literature and research on Chicanos in higher education is reviewed and considered in relation to educational stratification. An interpretation of the expansion and differentiation of higher education systems is presented to provide a context for analyzing the participation of Chicanos in higher education. The discussion considers the expanded role of educational institutions in the economic structure and the structural character of system expansion. A bibliography is appended. (SW)

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EDUCATIONAL HIERARCHIES AND SOCIAL DIFFERENTIATION:
THE STRUCTURAL PATTERNS OF CHICANO PARTICIPATION
IN COLLEGES AND UNIVERSITIES IN THE SOUTHWEST,
1972-1976

by

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under the direction of

Marvin W. Peterson, Project Director

May 15, 1980

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U.S. DEPARTMENT OF HEALTH,
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INTRODUCTION

Purpose of the Study

The decade of the sixties was marked by considerable political activity on the part of Chicanos, blacks, and other minorities. Increasing consciousness of gross inequalities in various social spheres was manifested in protests against those institutional arrangements considered responsible for maintaining the unjust distribution of privileges. Towards the end of the decade much of the thrust of these movements was diverted toward that 'panacea of all social problems': the school system.

In colleges and universities across the country, minority students sought to bring about institutional changes which would enhance the magnitude and character of their participation. We witnessed in response to these demands the advent of federal legislation, state policies, and institutional programs designed to increase the accessibility of higher education. Much of recent educational policy in the area of equity has been shaped by the theory that equal educational opportunity is achieved by providing access to groups who have historically been excluded or whose participation has been marginal. This study will test the currency of this theoretical perspective of educational equity through an examination of data

on the higher educational participation of Chicanos.

The prevailing approach to increasing equal opportunity in higher education has been to expand the size of the system so that all social groups are served. Specifically, this has meant establishing adjunct programs or institutions which become responsible for extending the opportunity which pre-existing structures have denied. Such strategies have in fact led to the accommodation of an increased number of Chicanos — a group that has been historically underrepresented among the college educated. But increased access tells us little about equality of access or opportunity. A major concern that influenced the design of this study is that an increase in enrollment may not represent a complete picture of participation. Previous studies note that Chicanos are concentrated in adjunct institutions; viz., two-year colleges and the less prestigious of the four-year institutions. Moreover, scholars often insist that any consideration of equality of educational opportunity must include some assessment of educational outcomes. But, how are increased access and enrollment distributions related to educational outcomes?

Any theoretical discussion of Chicanos and educational equity should examine the relation between extent of access, patterns of enrollment, and educational outcomes. Accordingly, the present study includes a measurement of the magnitude of Chicano enrollment and treats the distribution

of that enrollment as problematic. It is hoped that this type of analysis can be incorporated into the development of broadly applicable theories and models of educational equity.

Scope of the Study

This study examines the enrollment patterns of Chicanos in colleges and universities of the Southwest for 1972, 1974, and 1976. Enrollment patterns as defined herein, refer to the distribution of full time undergraduate enrollment by institutional type and level of undergraduate enrollment for each of the three years. The study then compares the enrollment patterns to graduation data for Chicanos for the academic year 1975-1976.

The decision to limit this investigation to the five southwestern states was a strategic one and dictated by a limitation of the available data. The sources of data are the compliance surveys conducted biennially by the Office for Civil Rights of the U.S. Department of Health, Education, and Welfare. This data has been collected for aggregate 'Spanish-surname' (1972 and 1974) or 'Hispanic' (1976) identification.¹ The latter terms are more inclusive than the term Chicano. Previous studies have dealt with this recurrent problem by concentrating on the Southwest.² Estimates are that about 80 percent of the Chicano population resides in the Southwestern states of Arizona, California, Colorado, New Mexico, and Texas.³ This regional

focus then is our attempt to simplify the otherwise impossible task of disaggregating the Hispanic data. It will also yield as full a picture of Chicano participation as is possible given current data collection practices.

Throughout the analysis chapter, data on whites and blacks will be included to provide a comparative framework. Thus, although the text will focus on analyses of Chicano data, a substantial amount of data on other groups forms part of the analysis and is included in most tabular presentations.

Definition of Terms

The following terms are defined as used throughout the study:

Chicano - the term refers to people of Mexican-origin and is synonymous with the often-used term 'Mexican-American' and the less prevalent term 'Mexican'.

Hispanic - a term more inclusive than Chicano which normally includes Puerto Ricans, Cubans, and other Spanish-origin groups. It will be used extensively throughout this study and with the caveat cited above will refer essentially to Chicanos.

Institutional type - the application of this term will

be specified in the text. It refers to two categorical variables used extensively in describing the distribution of enrollment and graduation data. The two variables classify institutions by the following distinctions: A) whether the institution is a two-year or a four-year institution, and B) the highest level of degree offered by the institution: associate's, bachelor's, master's, or doctorate. The latter classification permits a finer distinction among four-year institutions.

Senior institution - this term is used interchangeably with the term 'four-year' institution and refers to colleges and universities offering at least a four-year degree.

Two-year institution -

a community or junior college offering programs of less than four years duration. Unless otherwise specified, it also includes two-year branches of senior institutions.

Organization of the Study

The text is organized into five chapters. Chapter I provides a context for analysing the participation of Chicanos in higher education. An interpretation of the expansion and differentiation of higher educational systems is presented. The discussion considers the expanded role of educational institutions in the economic structure and the structural character of system expansion.

Chapter II reviews related literature and research on Chicanos in higher education. It relates this work to the discussion of educational stratification presented in Chapter I.

Chapter III describes the data sources used in this study and explains the method employed to conduct the analysis. Chapter IV then presents the findings of this analysis.

Finally, Chapter V discusses the major conclusions suggested by the study and considers the implications for prevailing theoretical models of educational equity.

Footnotes to Introduction

¹A more complete description of data sources is provided in Chapter III.

²See, for example, Ronald W. Lopez, Arturo Madrid-Barela, and Reynaldo Flores Macias Chicanos in Higher Education (Los Angeles: University of California, Chicano Studies Center Publications, 1976).

³Carlos Arce, "Chicanos in Higher Education." Integrated Education 81 (May-June 1976): 14-18

CHAPTER I

EXPANSION AND DIFFERENTIATION

Forces of expansion: the requirement for educated labor

For most of its early history, higher education operated as an institution with limited social functions. The training it provided was for a cultural and professional elite and a college degree had limited market value.¹ The nature of economic life was such that educational attainment was but one of several legitimate avenues to success. This fact was reflected in low college enrollments; as late as 1940, only 15 percent of the 18 to 21 year-olds attended college.²

During the course of this century, however, the need of an expanding corporate economy for educated labor thrust the entire educational system into an increasingly central role. Economic expansion and technological advances, particularly since the second world war, led to a dependence on specialized training in management, administration, research, and technology. These changes are reflected in census figures which indicate that the proportion of technical and professional workers rose from 7.5 percent in 1940 to 14.4 percent in 1974.³ The colleges have been called upon to produce this labor force and thus have

become an integral part of the economic order. Today, there are few opportunities for the upwardly mobile that do not require the completion of an advanced educational sequence. Frederick Rudolph notes that, indeed, "by the 1960's ... the American college and university had arrived at a position of awesome power in the culture, having achieved — without quite knowing it — a near monopoly over entry to social and economic success."⁴

Forces of expansion: Increased value of college credentials

The growth of 'professional' job categories and the role of the university in providing this training does not explain fully the magnitude of enrollment increases in the past few decades. College enrollment and degree attainment has outstripped the demand for advanced skills.⁵ What is important to consider is that a college education has become increasingly necessary to secure an increasing proportion of jobs regardless of their technical skill requirements. As a consequence, the market value of the degree has risen markedly.

Jencks and Riesman have proposed that the principal function of the American college is certification rather than education.⁶ To be sure, minority students who decide to invest in a college education have recognized the value of this certification: Society honors the credential per se as a sorting instrument to allocate graduates to its

most desirable jobs. Indeed, the certification role of higher education is what was 'sold' to consumers in the sixties. Billboards and television commercials warned one that "to get a good job, you need a good education". Economic theory-particularly the 'human capital' theory-primed the push for higher education as an investment. Young people were told that college graduates earned an average of \$100,000 more in their life time than high school graduates. The stress was clearly on the power of college credentials rather than on educational content. The message was that acquiring credentials was critical for 'getting ahead'.

Forces of expansion: Secular faith in education

There is a third factor which underlies the demand for increased access to higher education. It is the traditional role of education in sustaining the ideology of an 'open society' and its notion of equal opportunity.

Throughout history, the notion that schooling facilitates economic mobility has been an article of faith among social scientists, educators, policy makers, and consumers alike. The association has deep historical roots and is a critical component of the American ideology of an open society: a society in which each individual participates in an 'open contest' where he or she has an equal opportunity to achieve economic success and social status.⁷

Liberal democratic ideology portrays equal opportuni-

ty as a scenario in which the school system effectively sorts and selects society's most able individuals on the basis of individual merit rather than inherited privilege. In a meritocracy — the story goes — an individual's prospects are determined ultimately by his or her ability and motivation. An important element of this open system is an educational system, for it is through the school system that one is afforded an equal opportunity to reach a level of educational attainment that will demonstrate merit. In this scheme, differential levels of attainment certify differential degrees of merit. From a functional perspective, such an arrangement rationalizes social selection by establishing seemingly fair criteria (e.g., educational credentials) for assigning individuals to appropriate occupations. From a more critical perspective, such a selection system serves at least three important ideological functions: A) it legitimizes and justifies the dominant position of those who succeed in this 'contest', B) it rationalizes for those who do not acquire the appropriate credentials their immobility, and most important for the present discussion, C) it indicates to working class aspirants the appropriate route to upward social mobility.

To one extent or another, most American students and their families internalize these ideological notions of openness, equal opportunity, and upward mobility early on in their lives. Thus they learn that in a 'contest' system,

the way to get ahead or to gain equality is through the socially and politically acceptable route of educational attainment. A competitive struggle is fostered in which individuals and groups strive to equip themselves with those credentials which represent status and are objectively necessary to attain a more privileged position.⁸ The most immediate expression of this struggle is in an increased demand for more educational opportunities.

Chicanos, blacks and other 'non-traditional' students have particularly applied considerable pressure on the systems of higher education to expand their facilities and provide access. In recent years, policy questions on social and economic inequality have dealt primarily with racial and ethnic differences. Civil rights activists of the sixties attacked the gross social inequalities that prevailed and pointed to injustices in the educational sphere. It is significant that the political demands of Chicanos and blacks for social and economic equality accentuated as much as they did the educational inequities. It highlights the extent to which the ideology of equal opportunity prevails.

Given the role of the college in rationalizing the labor market and in sustaining a secular faith in 'contest mobility', these institutions could hardly have refused to open up the system and accommodate the demands of minorities in some way. The following section considers

the transformation which the system of higher education has undergone in response to the demands for access.

Expansion through Differentiation

As access is granted to an increasing proportion of high school graduates, the status value and allocative power of higher education credentials is grossly undercut. One result of expansion has been that the rewards of high occupational status formerly accorded to most any college graduate have been devalued as the supply of degrees becomes more plentiful. As noted earlier, the increase in the production of educated labor has exceeded the real requirements of the occupational structure for the professional and technical skills the college educated presumably bring to the labor market. The over-supply of educated labor has permitted employers to raise educational requirements for jobs at all levels.⁹ College graduates are taking jobs which traditionally have required only a high school diploma. This suggests, again, that a college credential is losing its status value and its power to place its possessor in a privileged position. Also, Collins has reviewed a number of research studies which indicate that education is largely unrelated to both the skill requirement of jobs and to on-the-job performance.¹⁰ It is apparent then, that the over-production of highly educated workers has led to a situation where the colleges have lost their ability to confer status and to

provide skill training. The systems of higher education have responded in a manner which seeks to reestablish their status value and allocating role, and thus controls the devaluation of their rewards. They have created highly differentiated systems of institutions which offer differentiated rewards.

As access to higher education is increased, a critical question which arises is access to whom? Traditionally, admissions policies in institutions of higher learning have operated to strengthen the status value of the college degree and the corresponding power to place graduates into the best jobs. Essentially, the criteria employed have systematically provided the greatest opportunity to the most economically and socially advantaged.¹¹ Increased access has mostly meant that a greater proportion of the privileged classes are being certified and ascribed into the middle and upper levels of the occupational hierarchy.

Traditional admissions criteria have been modified in some sectors of the system, however, and in some cases have been abandoned altogether. These changes, though, have been primarily limited to the newest and lowest rung of the academic hierarchy: the community or two-year colleges. These institutions have been the principal instrument in the 'transformation' of higher education:¹² a transformation that was effected to accommodate the demands of Chicanos, blacks, and other 'non-traditional' students for access to

the credential system. Two-year colleges have been created as free-access institutions. As such, they are assigned the role of keeping the 'contest' open and the ideology of equal opportunity alive.

Bases for differentiation: a division of academic labor

There are a number of factors which have led to a highly differentiated structure of higher education and to the structural position of the two-year college. The first one to consider is that as enrollments increased in higher education in the post-war period, established four-year institutions became increasingly selective. Non-selective institutions became selective and selective institutions became even more selective. The increased supply of college applicants permitted institutions to improve their status position by admitting only the most 'qualified' candidates. It is not difficult to draw a parallel to the arbitrary raising of educational requirements in the labor market. Employers have had the luxury of increasing the status of their firms by selecting a more 'qualified' work force. The result in the labor market is that lesser 'qualified' workers have been forced to take jobs lower in the 'labor queue'.¹³ Similarly, four-year institutions have actually been able to strengthen their relative position in the academic hierarchy. Like lesser 'qualified' workers, lesser 'qualified' students have been assigned to the lesser institutions.

There are additional factors which have led to a differentiation of functions in higher education. They are related to the first and further reinforce the structural rigidity of higher education systems.

Martin Trow, in a discussion of the transition of higher education from a 'mass' to a 'universal' system, distinguishes between the 'autonomous' and 'popular' functions of the university in U.S. society.¹⁴ He refers to the autonomous functions as those traditional ones of transmitting culture and creating new knowledge. The popular functions, in turn are those which are in response to pressures external to the university; namely, those which are usually referred to as the service functions. In this latter category, Trow includes the efforts of the university to provide increased access to a greater proportion of the age group. This dichotomy reflects Trow's concern that the popular functions would undermine the more important autonomous role of the university.

This differentiation of functions in higher education is a basis for the adaptive response of the system to a more demanding role: the role of serving a non-traditional clientele. In the post-war period, state legislatures, which are ultimately responsible for the systems of public higher education in this country, moved to create structures which would serve the burgeoning enrollments. State plans became popular and many were patterned after one of these

early efforts in the state of California. It is doubtful that any other state system can provide as lucid an illustration of the stratifying role of higher education.

The three-tier system in California is comprised of nine campuses of the University of California system, some twenty-four State Universities, and about one hundred local community colleges which are tuition-free. By legal mandate, enrollment in the first of these tiers is restricted to the top 12 percent of the high school graduating classes, applicants to the state universities must rank in the upper third, and the rest must enter the community colleges.

This state's educational structure is typical of the system as a whole as it seeks to accommodate the demands of increased access. State systems have developed institutions or segments of higher education especially designed to handle the expanded role of educating non-traditional students. In this way, the stratification of the public school systems in which students have been schooled, sorted, and certified is conveniently continued in the tracked system of post-secondary education.

The critical instrument in this sorting process is the junior or community college. Burton Clark has characterized these institutions as an important mechanism in "cooling out" those students who enter with "unrealistic" expectations about their chances to succeed in higher education.¹⁵ Many educators openly call for the community colleges to address themselves to this sorting task. K. Patricia Cross

for example, argues that "new students" are significantly different in their interests, achievements, and abilities and should accordingly receive a different type of education; her prescription is the community college.¹⁶ Amitai Etzioni concurs and characterizes the nature of a community college education: "If we can no longer keep the floodgates closed at the admissions office, it at least seems wise to channel the general flow from the four-year colleges and toward two-year extensions of high school in the junior and community college".¹⁷

The following section which reviews the literature on Chicanos and higher education will consider their participation in these colleges. Here we will summarize the major points made in this chapter and relate them to the design of this study.

The critical point made in the first part of this chapter is that the higher education system has assumed, or has had thrust upon it, an increasingly central role in rationalizing the socioeconomic structure. An increasing proportion of the labor force is going through a longer educational sequence. Educational requirements for jobs have been raised arbitrarily as the standard of educational attainment has increased. Colleges have embraced the task of training workers outside the professional, technical, and kindred categories. This pattern is reflected in statistics showing that the proportion of college

graduates employed in professional categories decreased from 95.1 in 1966 to 91.4 in 1976. Conversely, the proportion employed in 'blue-collar' occupations increased from 4.8 to 8.7 during the same period.¹⁸ Moreover, the college-non-college distinction has been blurred by the advent of mass higher education. It appears that educational attainment distinctions will increasingly be made within the systems of higher education.

This popularization or proletarianization of higher education has led to efforts to buttress its most prestigious institutions. This has been done by making them more selective and by creating other institutions to which the masses can be diverted. In considering the role of Chicanos and other 'non-traditional' students in higher education, it becomes critical to examine the patterns of enrollment throughout the higher educational hierarchy. Discussions of equal educational opportunity and theoretical models of access must be assessed in such a context.

Given the increasing importance of increasing levels of educational attainment, we must examine the viability of educational policies which provide access to a system without considering the association of access to a meaningful and comprehensive interpretation of educational equity.

The present study involves a comprehensive examination of the educational participation of Chicanos in higher education. It will attempt to ascertain, document, and

analyze the character of this participation by treating the distribution of enrollment throughout the educational hierarchy as problematic. Chapter III will describe the methods used in detail. Before that description, however, the following chapter will review the available literature on Chicanos and higher education.

Footnotes to Chapter I

¹Christopher Jencks and David Reisman, The Academic Revolution, Phoenix Edition (Chicago: University of Chicago Press, 1977).

²Martin Trow, "The Second Transformation of American Secondary Education," in Power and Ideology in Education, ed. Jerome Karabel and A. H. Halsey (New York: Oxford University Press, 1977), pp. 109, 112.

³Daniel Bell, The Coming of Post-Industrial Society: A Venture in Social Forecasting (New York: Basic Books, Inc., 1973), pp. 134-135; Tables 2-4 and 2-5.

⁴Frederick Rudolph, Curriculum: A History of the American Undergraduate Course of Study Since 1636 (San Francisco: Jossey-Bass Publishers, 1977), p. 24.

⁵Ivar Berg, Education and Jobs: The Great Training Robbery (Boston: Beacon Press, 1971).

⁶Jencks and Reisman, p. 61-64.

⁷The idea of a "contest mobility" system is developed by Ralph H. Turner; see "Sponsored and Contest Mobility and the School System," in Logic of Social Hierarchies, ed. Edward O. Laumann, Paul M. Siegel, and Robert W. Hodge (Chicago: Markham Publishing Company, 1977), pp. 407-419.

⁸For an elaboration of this Weberian theory of status group competition, see Randall Collins, "Functional and Conflict Theories of Educational Stratification," American Sociological Review 36 (1971), pp. 1002-1019; and Christopher Hurn, The Limits and Possibilities of Schooling (Boston: Allyn and Bacon, Inc., 1978).

⁹Randall Collins, "Where are Educational Requirements the Highest," Sociology of Education 47 (1974), pp. 419-442.

¹⁰Collins, 1971, and Hurn.

¹¹Jerome Karabel and Alexander Astin, "Social Class, Academic Ability, and College 'Quality'," Social Forces 53 (1975), pp. 381-398.

¹²Jerome Karabel, "Community Colleges and Social Stratification," Harvard Educational Review 42 (1972), pp. 521-562.

¹³For a discussion of this process in the labor market, see Lester C. Thurow, "Education and Economic Equality," The Public Interest 28 (1972), pp. 66-81.

¹⁴Martin Trow, "Reflections on the Transition from Mass to Universal Higher Education," Daedalus 99 (1970), pp. 1-42.

¹⁵Burton Clark, "The 'Cooling-Out' Function in Higher Education," in The Sociology of Education: A Sourcebook, Revised Edition, ed. Robert R. Bell and Holger R. Stub (Homewood, IL: The Dorsey Press, 1968).

¹⁶K. Patricia Cross, Beyond the Open Door: New Students to Higher Education (San Francisco: Jossey-Bass Publishers, 1972).

¹⁷Amitai Etzioni, "The High Schoolization of College," The Wall Street Journal, March 17, 1970.

¹⁸National Center for Educational Statistics, The Condition of Education, 1978 Edition (Washington, D.C.: Government Printing Office, 1978).

CHAPTER II

REVIEW OF LITERATURE ON CHICANOS AND HIGHER EDUCATION

Unlike the participation of blacks, the Chicano experience in higher education does not have deep historical roots. Chicanos have never had a network of Chicano colleges to turn to when they were systematically excluded from the mainstream of higher education. Consequently, the literature on Chicano higher education reflects this late arrival on the academic scene. All studies that have been done are relatively recent and the data and issues they cover are equally recent. Another characteristic of this literature is that it often has a regional focus. The primary reason for this is that since most of the Chicano population is concentrated in the Southwest, most significant enrollment is clustered in these states.

In one of the earlier enumerations of college attendance by Chicanos, Carter cites data from the 1960 census.¹ At ages 20-21, about 20 percent of the total population in the Southwest was in college. The corresponding figure for the 'Spanish-surname' was 12 percent. Carter noted that in areas with high ethnic concentration, local college enrollments reflected only 50 percent of the percentage of Chicanos in the area. Carter further points to the tenden-

cy of these small enrollments to be concentrated in the freshman and sophomore years. Also, he writes, "The Mexican American percentages are even lower in major state universities than they are in regional state colleges and lesser institutions" (emphasis added).

Carter reviews some earlier data reported by Manuel on enrollment at the University of Texas at Austin.² The enrollment of "Spanish-surname" students in the year 1928-1929 represented one percent of total enrollment. Almost four decades later in 1966-1967, the percentage had increased to only 2.8. Carter also includes figures from the California State Department of Education which governs the community colleges in the state. According to this study, 7.42 percent of junior college students enrolled in regular credit courses in the fall of 1966 had Spanish surnames.³ As part of this study, Carter conducted a survey of seven colleges and universities in the Southwest, "all of which draw students from areas with high percentages of Mexican Americans." It is on the basis of this survey that Carter writes about enrollments of Chicanos being 50 percent of their percentage in the surrounding community. It becomes clear that this calculation is based on admittedly problematic data from only seven institutions. Moreover, this report also shows that the estimates applied only to first-year students and that the percentages of representation decreased by the senior year.

This work by Carter illustrates the nature and extent of available data and analysis of Chicanos in higher education as late as 1970. One reason for this negligence is, of course, the lack of substantive data. Perhaps a more important reason, however, is that Chicanos themselves had not directed their attention to this area of inquiry. The advent of Chicano studies programs in colleges and universities has contributed to a perceived need to study all aspects of the Chicano experience. Participation in higher education is considered an important facet of this experience and its study has drawn the attention of Chicano educators.

Before reviewing the studies which have looked at the status of Chicanos in higher education, it is important to note an important caveat at this time. One of the major data-related problems in arriving at accurate analyses is that much of the available data are gathered for the aggregate Spanish-surnamed or Hispanic population. The census bureau has recently attempted to differentiate between these ethnic groups in its Current Population Surveys. However, the data on educational attainment has frequently overstated the education levels of the Chicano population because Chicano data is grouped with other Spanish origin groups.⁴ Cuban American educational levels approach that of whites and would bias an aggregate of Spanish-origin figures. The Office for Civil Rights data is valuable

because it represents the most complete source of institutional data. Unfortunately, this survey also combines data for Spanish-surnamed or Hispanic groups. The American Council on Education and UCLA annual survey of freshmen is the only major national survey which has for several years differentiated the Chicano component of the Spanish-surnamed data. Although much of this information is rendered unreliable by low response rates, the national norms of Chicanos are valuable since they constitute the only national data available which distinguishes this group from Hispanic and minority aggregates.

Generally, however, major data collections and reports have confounded research on Chicanos in combining Spanish-surnamed data. Earlier information is worse in this regard in that often Chicanos and other Hispanics were tallied with total minority figures or often in "other" categories. Recent information then should be considered better and relatively adequate, though clearly not as good as it can become. In subsequent reviews of data, it will be specified whether references are to the Spanish-surnamed aggregate or to Chicanos in particular. (For the purposes of this discussion, Chicanos and Mexican origin are synonymous terms.)

Arce discusses data from the March and October 1974 Current Population Surveys of the Bureau of the Census and provides one of the few portrayals of Chicanos and

their educational attainment.⁵ We learn that Chicanos are young as a group, having a median age of 18.9 years. Comparable figures for blacks and whites are 22.8 and 29.3 years, respectively. Forty-eight percent of the Mexican origin population are under 18, and 14 percent are under five years of age. The corresponding figures are 31 and 7 percent for whites and 14 and 12 percent for blacks. These figures imply, of course, that Chicanos will constitute a relatively large proportion of the college availability pool for years to come. Arce also reports some figures on the educational attainment of Chicanos. Of the 20 to 24 year olds, only 52 percent have completed high school. Although this compares favorably with Chicanos over 25 (29 percent), it is low in comparison to the parallel figures for blacks and whites of 72 percent and 85 percent. Among 20 to 24 year olds, the percentage completing at least one year of college for Chicanos, blacks and whites is 17, 27 and 43 percent, respectively. Of the 17 to 34 year old Chicanos, 142,000 are attending college. This accounts for only 1.7 percent of the 8.2 million college students and only 52 percent of the Spanish-origin college students. Since Chicanos constitute 3.2 percent of the total population and more than 60 percent of the Spanish origin population, it is clear that they are underrepresented both relative to the Spanish-origin aggregate as well as the total population.

Arce also cites data from the ACE/UCLA freshman survey for Fall 1971. While cautioning the reader about the reliability of information from a small data base, he presents a profile of Chicano freshmen in this study:

- Chicano freshmen were older; 44 percent were 19 or older, compared to 27 percent for blacks and less than 20 percent for whites.
- Predictably, the mothers and fathers of these Chicano freshmen had much less education than their black, white, or Puerto Rican counterparts.
- Chicano freshmen reported slightly lower parental income than blacks even though in the overall population, Chicano family income is slightly higher than black family income.
- Chicanos were less likely than any other group to draw on parental or family aid as a source for financial support for college.
- Chicanos attended college closer to home than other groups: 67 percent attended college less than 50 miles away from home, compared to 41 percent for blacks. This is partially explained by the large Chicano enrollment in community colleges in California. Twenty-one percent of the Chicano freshmen chose their college because they wanted to live at home, while only 11 percent of blacks did so.
- Finally, Chicanos reported lower educational aspirations; 20 percent planned (for) either an associate degree or no degree at all. The comparable figure for blacks was nine percent and for whites 11 percent.

These figures illustrate the subordinate position of Chicanos in higher education. An additional study by Lopez et al. further documents this status.⁶

Lopez et al. used primarily data tabulated by Stent and Brown to examine the participation patterns of the Spanish surnamed population.⁷

(Lopez et al. use the terms Chicano and Spanish surname interchangeably. They refer mainly to "Chicano" enrollment, although most of the references are to Spanish surname aggregate data reported by Stent and Brown.) Since much of this data is from the Office for Civil Rights biennial surveys, it allows for analysis by institutional type. Lopez et al. note that the Spanish-surnamed population is heavily concentrated in two-year colleges. Forty-five percent of the Spanish-surnamed students were enrolled in these colleges in 1970. The corresponding figures for blacks and whites are 27.7 and 22.2. Thirty-two percent of the Spanish-surnamed are in four-year colleges and 23 percent are in universities. A stratified pattern of enrollment is clearly seen here. No other racial or ethnic group was distributed as systematically throughout the hierarchy of institutional types. In a survey of 153 institutions conducted by Ferrin et al. in the Southwestern states, it was found that more than twice as many "Mexican Americans" were attending community colleges as four-year colleges and universities. They further noted:

In counties with at least 50,000 Mexican Americans... three times as many Mexican Americans are in community colleges as in public senior institutions. Further, Mexican Americans constitute 16 percent of the community college student body, a percentage that nearly corresponds to their proportion (18 percent) in the population in those counties. The corresponding figure is about 8 percent at public 4-year colleges.

A related characteristic of Chicano enrollment is that its proportional representation decreases in a linear fa-

shion with each succeeding year. A look at the Stent and Brown report tables of OCR data by 1970 shows that, in the five Southwestern states, the Spanish-surnamed percentage of the total enrollment figure varies inversely with the year of enrollment for all five states (Texas, California, Colorado, Arizona, and New Mexico). These statewide and regional statistics seem to point to a higher level of attrition for Chicanos than for other groups (see Tables II 40 B, C, M, and T in Stent and Brown, 1974). This is very discouraging to Chicanos since their input levels to begin with already indicate a gross underrepresentation. There has not been any research to study whether these trends have continued in subsequent OCR surveys.

The present study will examine this pattern in the context of a larger structural analysis. The following chapter describes the data sources being used and explains the methods employed in conducting the analysis.

Footnotes to Chapter II

¹Thomas P. Carter, Mexican Americans: How the schools have failed them. College Board Review, Spring 1971, 75, pp. 5-11.

²Ibid., Herschel T. Manuel, The Spanish-Speaking Children of the Southwest: Their Education and the Public Welfare. Austin: University of Texas Press, 1965.

³California State Department of Education, Racial and Ethnic Survey of California Public Schools, Part I: Distribution of Pupils, Fall 1966. Sacramento: Author, 1967.

⁴Carlos Arce, Chicanos in Higher Education. Integrated Education, May-June, 1976, 81, pp. 14-18.

⁵Ibid.

⁶Ronald W. Lopez; A. Madrid-Barela; and R. Flores-Macias, Chicanos in Higher Education: Status and Issues (Monograph No. 7). Los Angeles: University of California, Chicano Studies Center, 1976.

⁷Madelon Delaney Stent; and F. Brown, Minority Enrollment and Representation in Institutions of Higher Education. New York: Ford Foundation, 1974.

⁸Richard I. Ferrin; R.W. Jonsen; and C.M. Trimble, Access to College for Mexican Americans in the Southwest (Higher Education Survey Report No. 6). N.Y.: College Entrance Examination Board, 1972.

CHAPTER III

DATA AND METHODS

Identification and Description of Data Sources

The primary sources of data will be the compliance surveys conducted biennially by the Office for Civil Rights (OCR) of the Department of Health, Education, and Welfare. Carlos Arce utilized these sources and provides a thorough description of the data sets.¹

Title VI of the Civil Rights Act of 1964 provides for the collection of data on the participation of minorities in higher education. The law authorizes OCR to require institutions receiving federal funds to conduct a census of students and report their enrollment by race. These surveys have been conducted biennially since 1964. Enrollment figures since 1972 have been collected by level of undergraduate enrollment, graduate and professional status, and part-or full-time status. The 1972 survey collected data by "institutional components" which is generally the school enrolled in. In 1974 the data is additionally available by sex and graduate degree level (master's, doctoral). The 1974 data collection is also more complex because it breaks down field of study into 28 categories. The 1976 survey requested separate ac-

counting of foreign students (non-resident alien). This category will tend to contribute to a more accurate count of minority students. It should, for instance, filter non-resident Spanish-surnamed or Hispanic students. Also, since 1976, the racial-ethnic survey has been conducted through the Higher Education General Information Survey (HEGIS) of the National Center for Educational Statistics (NCES).

In 1976 institutions provided graduation figures for minorities for the first time on a national basis. Data was collected on degrees conferred between July 1, 1975 and June 30, 1976. Figures for bachelor's, master's, and doctor's degrees are available by sex and field of study. Two-year colleges reported figures for associate's degrees awarded by whether or not they were creditable toward a bachelor's degree, and by sex. Additional breakdowns were included for occupational programs.

Methodology

Copies of four magnetic data tapes were purchased for this study through the Office for Civil Rights. The four tapes store survey information for each of the four data sets used in this study: 1) 1972 enrollment data (this tape also stores information from the 1968 and 1970 surveys), 2) 1974 enrollment data, 3) 1976 enrollment data, and 4) 1975-1976 graduation data.

It was necessary in each case to extract the data and make it compatible with the Michigan Interactive Data Analysis System (MIDAS), a data manipulation and statistical program package developed by the Statistical Research Laboratory at The University of Michigan. The 1972 and 1974 enrollment tapes proved extremely difficult to work with. The data was stored with OCR's analysis system in mind; it required the use of a FORTRAN subroutine and the writing of a program for each manipulation. Instead, considerable consultation with a programming specialist was required to prepare the data for use with MIDAS. The 1976 enrollment and graduation data tapes, prepared by NCES, were much easier to manipulate with available program packages.

Preparation of data files for analysis required considerable editing of the data, especially for 1972 and 1974. Extensive checks for internal consistency were conducted. The procedure involved computing a sum for sub-totals and comparing it to the total in the data provided. For example, adding freshman, sophomore, junior, and senior totals and comparing the sum to the total provided. A program was used which then listed those institutional names or identifiers which had inconsistent data. About 10 percent of the 1972 and 1974 data sets had one or more errors. Most of these errors were in the subtotals. Many institutions in the data sets had missing data; some had no data. In most cases where errors were present it was

possible to correct it. Those cases (institutions) which could not be corrected or which had missing data were dropped from that year's data set. A great deal of time was invested in file editing since so much of the analysis plan calls for detailed breakdowns and computations. We can be confident, however, that the resultant data files are internally consistent.

The following tables categorize the institutions included in the study by state, type of institution, and highest level of degree offered for the four data sets analyzed.

	1972 Enrollment	1974 Enrollment	1976 Enrollment	1975-76 Graduation
Arizona	11	17	19	19
California	133	187	195	195
Colorado	27	32	32	33
New Mexico	14	16	16	11
Texas	108	130	132	130
Two-year	137	188	198	192
Four-year	156	194	196	196
Associate's	137	188	198	192
Bachelor's	43	49	52	54
Master's	63	84	84	83
Doctorate	<u>50</u>	<u>61</u>	<u>60</u>	<u>59</u>
Totals	293	382	394	388

It should be noted that the 1972 enrollment data has considerably less institutions than the other years. This is principally because the 1972 data was taken from a merged file built by the Office for Civil Rights which included 1968 and 1970 survey data. Only those institutions

reporting all three years were included in the file. It can be seen from the breakdowns provided that much of the difference is accounted for by the fewer number of two-year colleges. Since a considerable part of the analyses to be conducted rely on the institutional type breakdown, the reader is advised to exercise caution in interpreting trend data. In some cases trend observations are limited to 1974 and 1976 data.

The groups identified throughout this study are 1) Chicanos, 2) blacks, 3) whites, and 4) others. The latter category includes Native Americans, Asian Americans, and in 1976 data sets, 'non-resident aliens'. These groups were combined for purposes of efficiency and ease of presentation. It does not imply that these 'other' groups are similar. On the contrary, the experiences of these groups is very different. Native Americans are grossly underrepresented in higher educational institutions while Asian Americans are somewhat overrepresented.

Limitations of the data

A major limitation of the data with respect to Chicanos is that in all of the surveys conducted, counts have been for aggregate Spanish-surnamed or Hispanic (1976) identifiers. The latter terms are more inclusive, generally referring to a composite of people of Mexican, Puerto Rican, Cuban, and other Spanish-origin. The term

hispanic or Spanish-surnamed may be useful for purposes of categorizing non-whites and non-blacks but it is rather useless as an analytical tool. The historical and educational experiences of these groups is very different and each of these groups finds the aggregate categorization useless for understanding its own reality.

For purposes of the present study, a decision to concentrate on the Southwestern states of Arizona, California, Colorado, New Mexico, and Texas was necessary to isolate to the extent possible the Chicano or Mexican population. The U.S. Census Bureau estimates that 87 percent of the Mexican-origin population resides in these Southwestern states. Also, about 85.4 percent of the 'Spanish-origin' population in the Southwest is Mexican.³

A compromise was reached in deciding on the appropriate ethnic identifier to use for the text. Hispanic, the category used in the 1976 surveys is used in all tabular presentations. The term Chicano is used throughout the narrative. The purpose of using the term Chicano is two-fold. First, as the Census cited above indicates, when speaking of the Southwest Hispanic we are speaking primarily of the Chicano. Second, it is hoped that the confounding referents will heighten sensitivity for the need to modify current data collection practices.

Other limitations of the data relate to its quality. There were a number of analysis plans which had to be

abandoned. Doing analysis of part-time enrollment was not possible because of the amount of missing data on this variable. The same was true of data on transfers, which formed part of the 1974 enrollment survey.

These limitations notwithstanding, it was possible to prepare for analysis a substantial computer file of observations for nearly four hundred institutions reporting data for four separate surveys. Data for the critical variables in the study — ethnicity, institutional type, and level of enrollment is of high quality having undergone a thorough editing process. The following Chapter describes the variables more fully and presents the findings of the analysis.

Before proceeding, however, a further clarification concerning the data is in order. It must be understood that the survey data collected by OCR and NCES are for institutions and not individuals. The institution, therefore is the unit of analysis. This is an important factor to keep in mind in interpreting the analyses in Chapter IV. In studying enrollment patterns and trends, it is important to recall that we are following institutional or systemic variations rather than student-specific ones. Our focus must necessarily be on how and to what extent southwestern colleges and universities are serving the Chicano population.

The lack of data on individuals means that we can-

not control for the actual progress or movement of specific students into or out of these educational systems. Should we report, hypothetically, that an enrollment figure decreased from 100 in 1974 to 50 in 1976, we cannot infer that the 50 1976 enrollees are necessarily a subset of the 100 1974 enrollees. We can, however, conclude that the institutions being considered are enrolling half as many students in 1976 as in 1974. Given that the concern throughout this study is with the structural analysis of enrollment rather than with its magnitude, the institutional data described above is suitable for the analysis presented in the following chapter.

Footnotes to Chapter III

¹This description borrows considerably from: Carlos Arce, Historical, institutional and contextual determinants of black enrollment in predominantly white colleges and universities, 1946 to 1974 (Doctoral dissertation, University of Michigan, 1976). Dissertation Abstracts International, 1976, 37, 3484A-3485A. (University Microfilms No. 76-27, 437).

²This category includes institutions whose highest degree offering was a first professional degree (e.g., Law schools and Schools of Divinity) and those who offered some certification beyond the master's degree but not the doctorate.

³U.S. Bureau of the Census, Current Regulation Reports, Series P-20, No. 329, "Persons of Spanish origin in the United States: March 1977", U.S. Government Printing Office, Washington, D.C., 1978; P. 19, calculation from Table 1.

CHAPTER IV
ANALYSIS OF FULL-TIME UNDERGRADUATE
CHICANO ENROLLMENT

The previous chapters conceptualized the global questions of participation and outcomes which this study explores. The discussion notes that a full understanding of the Chicano experience in higher education requires a comprehensive assessment of participation. This chapter presents the results of such an analysis. As an introduction to this chapter, and a summary of earlier considerations, the following section sets forth a list of questions which will serve as an outline of the analysis to follow. The list includes a series of hypotheses that are related to the questions posed and which will be 'tested' in the study.

Research questions and hypothesized relationships

1. How well are Chicanos represented in colleges and universities of the Southwest?

Hypothesis: Chicanos are underrepresented in institutions of higher education relative to their proportion in the population of the entire southwest region or any of the five states.

2. How is Chicano enrollment distributed by type of institution: two-year college, four-year college, major university?

Hypothesis: The extent of Chicano underrepresentation increases with each level of the academic hierarchy.

3. How is Chicano enrollment distributed by level of enrollment; i.e., across the four levels of undergraduate enrollment?

Hypothesis: The enrollment of Chicanos is relatively concentrated in the entry levels.

4. Were there any shifts in enrollment patterns between 1972 and 1976?

Hypothesis: Chicano proportions of undergraduate enrollment and patterns of enrollment distribution did not change significantly between 1972 and 1976.

5. What are the graduation levels and patterns for Chicanos by:
type of institution?
level of degree earned?

Hypothesis: Chicanos are earning a lower proportion of bachelor's and associate's degrees relative to both blacks and whites.

6. Is it possible to predict graduation levels by looking at preceding enrollment levels? That is, are predictable proportions of Chicano undergraduates enrolled moving through the system to attain a bachelor/s degree?

Hypothesis: The proportion of degrees earned by Chicanos is less than their proportion of upper level enrollment, and the ratio is lower relative to both blacks and whites.

7. Can questions of attrition and retention be addressed through an analysis of enrollment and graduation data?

Hypothesis: Within four-year institutions, Chicanos are much better represented in the undergraduate years than in graduation figures. In other words, Chicanos have a higher attrition rate than whites and blacks.

8. Are levels of two-year college enrollment associated with degree completion?

Hypothesis: High levels of two-year college enrollment in a state are associated with high levels of graduation.

Representation of Chicanos

The proportion of Chicano full-time enrollment in southwestern colleges and universities increased from 8.0% in 1972 to 9.9% in 1976 (See Table 1). A glance at Tables 2-5, however, illustrates sharp differences among the states. The gains in proportional representation were negligible in Arizona and Colorado. The latter two states also show the only two non-linear patterns of growth. In Arizona, Chicano enrollment increased to 8.1 in 1974 only to drop to 7.8 in 1976. In Colorado, the proportion of Chicanos dropped in 1974 before barely returning to the 1972 level in 1976.

A comparison with changes in black enrollment is interesting. Whereas Chicano representation between 1972 and 1976 increased 24% (from 8.0 to 9.9), the black proportion increased 26% from 6.6 to 8.3. Such a comparison, however, must be considered in the context of population statistics.

The most common and basic method used in assessing the enrollment of Chicanos and other minorities has been to compare the degrees of representation. This approach involves comparing the proportion of enrollment of a given group with its proportion in the population. Here, a note on the population statistics to be used is necessary.

As noted earlier, the collection of data by gross categories such as 'Hispanic' or 'Spanish-surname' makes

TABLE 1

Total and mean percent enrollment for 4 ethnic groups, Southwestern states, 1972 - 1976

	ETHNIC GROUPS								TOTAL N
	HISPANIC		BLACK		WHITE		OTHER		
	N	%	N	%	N	%	N	%	
1972	63606	8.0	52206	6.6	646150	81.4	31495	4.0	793457
1974	94295	8.3	78104	6.9	913653	80.9	43314	3.8	1129366
1976	117367	9.9	98975	8.3	882264	74.4	86827	7.3	1185433

TABLE 2

Total and mean percent enrollment for 4 ethnic groups, by state, 1972

	ETHNIC GROUPS								TOTAL N
	HISPANIC		BLACK		WHITE		OTHER		
	N	%	N	%	N	%	N	%	
Arizona	4445	7.4	1470	2.4	51911	86.5	2195	3.7	60021
California	28235	6.9	28196	6.9	330198	80.2	24968	6.1	411597
Colorado	2975	6.3	1381	2.9	41750	88.7	961	2.0	47067
New Mexico	5721	19.9	605	2.1	21613	75.2	816	2.8	28755
Texas	22230	9.0	20554	8.4	200678	81.6	2555	1.0	246017

TABLE 3

Total and mean percent enrollment for 4 ethnic groups, by state, 1974.

	ETHNIC GROUPS								TOTAL N
	HISPANIC		BLACK		WHITE		OTHER		
	N	%	N	%	N	%	N	%	
Arizona	5081	8.1	1525	2.4	54246	86.7	1728	2.8	62580
California	48348	7.3	47327	7.2	526944	80.0	36093	5.5	658712
Colorado	4135	5.4	1843	2.4	69820	90.4	1414	1.8	77212
New Mexico	6758	21.9	737	2.4	22174	71.9	1154	3.7	30823
Texas	29973	10.0	26672	8.9	240469	80.1	2925	1.0	300039

TABLE 4

Total and mean percent enrollment for 4 ethnic groups, by state, 1976.

	ETHNIC GROUPS								TOTAL N
	HISPANIC N	%	BLACK N	%	WHITE N	%	OTHER N	%	
Arizona	5910	7.8	2110	2.8	64479	84.9	3458	4.6	75957
California	57912	9.0	53912	8.4	463226	72.3	65959	10.3	641009
Colorado	5571	6.4	2887	3.3	76388	87.1	2839	3.2	87685
New Mexico	8134	26.0	812	2.6	20666	66.2	1622	5.2	31239
Texas	39840	11.4	39249	11.2	257505	73.7	12949	3.7	349543

TABLE 5

Total Hispanic enrollment and mean percent of
total, by state, 1972 - 1976

	1972		1974		1976	
	N	%	N	%	N	%
Arizona	4445	7.4	5081	8.1	5910	7.8
California	28235	6.9	48348	7.3	57912	9.0
Colorado	2975	6.3	4135	5.4	5571	6.4
New Mexico	5721	19.9	6758	21.9	8134	26.0
Texas	22230	9.0	29973	10.0	39840	11.4

precise comparisons with census population data impossible. For the present study, it was determined that using the 1970 population figures for the 15 to 19 year-old cohort would be most appropriate for analysis of college enrollments. This age group can be considered the appropriate 'availability pool' from which college students are recruited. Moreover, the age distribution of the three ethnic groups being studied is quite different. The Hispanic and black populations are significantly younger than the white group. The median age for the Spanish-origin population in 1970 was 20.1. The corresponding figures for blacks was 20.9, and for whites 27.2. Accordingly, looking at total population figures would render comparisons even less accurate. The question of which Hispanic population statistic to use to compare with Hispanic enrollment is a more complex one. The Census Bureau has 1970 data available for three separate group identifications: "Spanish language or Spanish Surname", "Spanish Surname", and "Spanish-origin". The Spanish-origin figure is generally considered the most accurate estimate because the relevant question used in the 1970 Census permitted respondents to identify themselves as such. The other categories were imputed from other indirect questions. To provide the reader a comparative framework, the percentage share of the 15 to 19 year-old age group for all three Hispanic categories is presented below.

TABLE 6
Percentage share of 15-19 year-old
cohort for three Hispanic categories

	Spanish Surname or Spanish Language	Spanish Origin	Spanish Surname
Arizona	21.2	18.0	15.4
California	17.4	13.7	12.4
Colorado	14.9	12.3	11.2
New Mexico	43.4	33.9	33.6
Texas	21.3	18.9	17.5
Southwest	19.5	16.1	14.8

The Spanish-surname category is used in the following analyses for two principal reasons. First, the figure as can be seen, is the most conservative of the three figures. This means that in calculating representation, whenever underrepresentation is cited, one can be confident that those measures are at least as severe as reported. The second reason for preferring the Spanish-surname figures is that the same term was used in two of the three data collections/sets being analyzed in the present study (in 1972 and 1974). The lack of uniformity in calculating enrollments among institutions notwithstanding, the Spanish-surname category promises the most proximate comparison figures.

Table 7 summarizes the data available for a comparative analysis of representation. In this case, the comparison is being made of the Hispanic and black data. The first two columns in the Table shows the Spanish-surname and black proportions of the 15 to 19 year old cohort. Subsequent columns show, for each year, the enrollment proportions of the two groups for each of the five states

TABLE 7

Hispanic and Black percentage of total enrollment
and parity ratios, by state, 1972-1976; percent
Hispanic and Black 15-19 year-old population, 1970

	Percentage of 15-19 year olds		1972				1974				1976			
	1970		Hispanic		Black		Hispanic		Black		Hispanic		Black	
	Spanish Surname	Black	Enrol. %	Parity Ratio	Enrol. %	Parity Ratio	Enrol. %	Parity Ratio	Enrol. %	Parity Ratio	Enrol. %	Parity Ratio	Enrol. %	Parity Ratio
Arizona	15.4	3.3	7.4	.48	2.4	.73	8.1	.53	2.4	.73	7.8	.51	2.8	.85
California	12.4	7.6	6.9	.56	6.9	.91	7.3	.59	7.2	.95	9.0	.73	8.4	1.1
Colorado	11.2	2.9	6.3	.56	2.9	1.0	5.4	.48	2.4	.83	6.4	.57	3.3	1.1
New Mexico	33.6	2.1	19.9	.59	2.1	1.0	21.9	.65	2.4	1.1	26.0	.77	2.6	1.2
Texas	17.5	21.3	9.0	.51	8.4	.39	10.0	.57	8.9	.42	11.4	.65	11.2	.53
Southwest	14.8	11.3	8.0	.54	6.6	.58	8.3	.56	6.9	.61	9.9	.66	8.3	.73

and the Southwest. Additionally, a measure of parity representation has been calculated for each group and state for the three years. This calculation is presented in the table as the "parity ratio" and is arrived at as follows:

$$\text{Parity ratio} = \frac{(A) \text{ Group Proportion of Enrollment}}{(B) \text{ Group Proportion of Cohort}}$$

In this equation,

when $\frac{A}{B} < 1$, a condition of underrepresentation obtains i.e., the proportion of a group's enrollment ratio is less than its corresponding population ratio;

similarly, if

$\frac{A}{B} > 1$, a condition of overrepresentation obtains;

and, when $\frac{A}{B} = 1$, a condition of parity representation obtains.

Looking at Table 7, we note that in 1972, the highest parity ratio measure for Chicanos is in New Mexico where they make up 33.6% of the cohort, and 19.9% of the full-time undergraduate enrollment. Arizona in turn has the lowest parity ratio for Chicanos where the 7.4 enrollment percentage is less than half the corresponding population figure of 15.4. A comparison with black enrollment reveals that the black parity ratio is higher than the Chicano ratio in four of the five states. Texas, where blacks are grossly underrepresented, is the only exception to the pattern. In three states: California, Colorado, and

New Mexico, blacks are well represented and actually reach a level of parity in the latter two.

A check for change in this brief historical period between 1972 and 1976 shows some movement of Chicano enrollment towards parity representation. Again, the states of Arizona and Colorado are well behind the others. It is interesting to note that California, by 1976, joined Colorado and New Mexico in reaching a parity representation level for blacks. In fact, in each of these states, blacks are actually overrepresented as measured in the present analysis. Chicanos, on the other hand, are still well underrepresented in the entire southwest region.

Thus, we conclude from the above that, as hypothesized, Chicanos are clearly underrepresented throughout the Southwest region relative to their numbers in the population. Moreover, we find that Chicanos are underrepresented relative to blacks in four of the five states.

A more thorough discussion of the magnitude of enrollment and relative levels of representation could be pursued here. However, the thesis stressed throughout these pages has been that such analyses are limited and mask the structural character of Chicano participation in higher education. Accordingly, the balance of this analysis seeks to move beyond the focus on magnitude and representation and toward a more comprehensive understanding of participation. The following section begins

by looking at the distribution of enrollments by institutional types.

Distribution of Enrollment by Institutional Type (I)

This sections considers the distribution of Chicano enrollments between two-year and four-year institutions. It has been noted earlier that past analyses have revealed a concentration of Chicanos in two year colleges. Here, we analyze its extent and explore the patterns accross the five states and the three time periods.

Tables 8 through 13 present the proportional share of enrollment of each ethnic group in each type of institution, and the distribution of each group's enrollment between the 2 and 4 year colleges. Data for 1972, 1974, and 1976 are presented separately.

We note in Table 8 that, in 1972, Chicanos made up 9.2 percent of the two-year college enrollment and 7.3 percent of the four-year college enrollment. Thus, they were more underrepresented in the four-year than in the two-year institutions. Tables 10 and 12 illustrate that this pattern became even clearer by 1976. These data make it apparent that the modest increases in Chicano enrollment noted in reviewing the aggregate data above can be explained by the increases registered in two-year colleges. The Chicano proportion in four-year colleges increased only slightly from 7.3 to 7.7. Tables 9, 11, and 13 look at the

TABLE 8

Total and mean percent enrollment for 4 ethnic groups by type of institution, southwestern state, 1972

	ETHNIC GROUPS								TOTAL N
	HISPANIC		BLACK		WHITE		OTHER		
	N	%	N	%	N	%	N	%	
2-year	26363	9.2	22412	7.9	224869	78.8	11839	4.1	285483
4-year	37002	7.3	29698	5.9	419764	82.9	19634	3.9	506098

TABLE 9

Percentage distribution of enrollment of three ethnic groups by institutional type, southwestern states, 1972

Percentage of group in	ETHNIC GROUPS		
	HISPANICS (%)	BLACKS (%)	WHITES (%)
2-year COLLEGE	41	43	35
4-year COLLEGE	59	57	65

TABLE 10

Total and mean percent enrollment for 4 ethnic groups by type of institution, southwest, 1974

	ETHNIC GROUPS								TOTAL N
	HISPANIC		BLACK		WHITE		OTHER		
	N	%	N	%	N	%	N	%	
2-year	49432	11.0	39400	8.7	344452	76.3	17930	4.0	451214
4-year	44821	6.6	38686	5.7	569096	83.9	25384	3.7	677987

TABLE 11

Percentage distribution of enrollment of three ethnic groups by institutional type, southwestern states, 1974

Percentage of group in	ETHNIC GROUPS		
	HISPANICS (%)	BLACKS (%)	WHITES (%)
2-year COLLEGE	52	50	38
4-year COLLEGE	48	50	62

TABLE 12

Total and mean percent enrollment for 4 ethnic groups by type of institution, southwestern states, 1976

	ETHNIC GROUPS								TOTAL N
	HISPANIC		BLACK		WHITE		OTHER		
	N	%	N	%	N	%	N	%	
2-year	61398	13.4	50381	11.0	312464	68.2	33937	7.4	458180
4-year	55969	7.7	48594	6.7	569800	78.3	52890	7.3	727253

TABLE 13

Percentage distribution of enrollment of three ethnic groups by institutional type, southwestern states, 1976

Percentage of group in	ETHNIC GROUPS		
	HISPANICS (%)	BLACKS (%)	WHITES (%)
2-year COLLEGE	52	51	35
4-year COLLEGE	48	49	65

distribution of each ethnic group across the two types of colleges. Table 9 should be interpreted with caution because as explained in the previous chapter, it is likely that two-year institutions were underrepresented in the 1972 data made available for this analysis. The 1974 and 1976 data in Tables 11 and 13, however, show that Chicanos and blacks were more likely to be enrolled in two-year colleges and that they were much more likely to be enrolled in these colleges than were white students. More than half of Chicano students (52 percent) were concentrated in junior and community colleges in 1976. In contrast, about a third of the white students (35 percent) were enrolled in these institutions.

To compare how these patterns of Chicano enrollment vary by state we turn to Tables 14 to 16. We note that only in New Mexico was there any meaningful increase in the proportion of Chicanos in four-year colleges by 1976. In Arizona, the proportion actually decreased in 1974 and again in 1976. Texas presents a revealing pattern. In earlier Tables of aggregate data, Chicano enrollment appeared to have increased modestly in this state (See Table 7). In Tables 14, 15, and 16, however, it becomes clear that the gains were limited to proportional increases in the junior colleges. This lack of change in the four-year college figures suggests that improvements are taking place only at entry levels: i.e., the freshman and sophomore levels. This hypothesis will be explored more

TABLE 14

Total and mean percent enrollment for 4 ethnic groups by state and type of institution, 1972

	ETHNIC GROUPS								TOTAL N
	HISPANIC		BLACK		WHITE		OTHER		
	N	%	N	%	N	%	N	%	
Arizona									
2-year	2151	11.9	731	4.1	14343	79.5	823	4.6	18048
4-year	2294	5.5	739	1.8	37568	89.5	1372	3.3	41973
California									
2-year	16579	8.3	15741	7.8	158297	78.9	10012	5.0	200629
4-year	11656	5.5	12455	5.9	171901	81.5	14956	7.1	210968
Colorado									
2-year	1178	10.7	591	5.3	9055	82.0	225	2.0	11049
4-year	1797	5.0	790	2.2	32695	90.8	736	2.0	36018
New Mexico									
2-year	316	15.1	64	3.1	1621	77.6	87	4.2	2088
4-year	5405	20.3	541	2.0	19992	75.0	729	2.7	26667
Texas									
2-year	6139	11.4	5285	9.8	41553	77.4	692	1.3	53669
4-year	15850	8.3	15173	8.0	157608	82.7	1841	1.0	190472

TABLE 15

Total and mean percent enrollment for 4 ethnic groups by state and type of institution, 1974

	ETHNIC GROUPS								TOTAL N
	HISPANIC		BLACK		WHITE		OTHER		
	N	%	N	%	N	%	N	%	
Arizona									
2-year	3177	14.1	988	4.4	17552	78.1	771	3.4	22488
4-year	1904	4.7	537	1.3	36694	91.5	957	2.4	40092
California									
2-year	33585	9.8	29850	8.7	264236	76.8	16231	4.7	343902
4-year	14763	4.7	17477	5.6	262708	83.4	19862	6.3	314810
Colorado									
2-year	554	7.4	293	3.9	6526	87.4	95	1.3	7468
4-year	3581	5.1	1550	2.2	63294	90.8	1319	1.9	69744
New Mexico									
2-year	540	17.7	124	4.1	2223	72.8	165	5.4	3052
4-year	6218	22.4	613	2.2	19951	71.8	989	3.6	27771
Texas									
2-year	11576	15.6	8145	11.0	53915	72.6	668	.9	74304
4-year	18355	8.1	18509	8.2	186449	82.7	2257	1.0	225570

TABLE 16

Total and mean percent enrollment for 4 ethnic groups by state and type of institution, 1976

	ETHNIC GROUPS								TOTAL N
	HISPANIC		BLACK		WHITE		OTHER		
	N	%	N	%	N	%	N	%	
Arizona									
2-year	3924	14.1	1318	4.7	20959	75.3	1624	5.8	27825
4-year	1986	4.1	792	1.6	43520	90.4	1834	3.8	48132
California									
2-year	36441	11.7	34139	10.9	214472	68.7	27306	8.7	312358
4-year	21471	6.5	19773	6.0	248754	75.7	38653	11.8	328651
Colorado									
2-year	1678	10.7	1055	6.7	12273	78.0	722	4.6	15728
4-year	3893	5.4	1832	2.5	64115	89.1	2117	2.9	71957
New Mexico									
2-year	494	17.4	125	4.4	2030	71.4	196	6.9	2845
4-year	7640	26.9	692	2.4	18636	65.6	1426	5.0	28394
Texas									
2-year	18861	19.0	13744	13.8	62730	63.1	4089	4.1	99424
4-year	20979	8.4	25505	10.2	194775	77.9	8860	3.5	250119

directly in a later section when we look at enrollment distribution by levels of enrollment. First, however, a further analysis of enrollment by institutional type will be pursued.

Distribution of Enrollment by Institutional Type (II)

A finer distinction can be made among senior institutions which permits a more comprehensive analysis of enrollment distributions. For this analysis, a second institutional type variable was created which classifies institutions according to their highest degree offering. We can thus distinguish between those who have the Associate's degree, the Bachelor's degree, the Master's or first professional degree, and the doctorate as their highest offering.

The rationale behind this type of analysis is related to the proposition set forth earlier that where one goes to college may be as important as whether one goes or not. The categorization proposed here imputes a prestige scale to the various levels. It assumes that in each state system, the least prestigious of the institutions is the two-year college. On the other end of the scale is the major research university or universities offering the highest degree available: the doctorate. Just below this category is the institution offering a range of graduate programs and the Master's degree. At the lower end of the senior institution hierarchy is the increasingly rare college which offers only four-year programs and the

Bachelor's degree. The interest here is in investigating whether Chicanos are concentrated in the less prestigious of the four-year institutions the way they are concentrated in the lower end of the dichotomous two-year and four-year category considered above.

Tables 17, 18, and 19 provide the breakdown for 1972, 1974, and 1976 respectively. The clearest observation that can be made is that among the senior institutions, Chicanos are best represented in the Master's degree-granting universities. They are less well represented in the four-year colleges and the major research universities granting the Ph.D.. The state-by-state breakdown in the following three tables (20-22) shows significant differences in these patterns among the states. Here, the parity ratios and enrollment summaries presented in Table 7 are useful points of reference. Using them, we can make several observations about the 1976 data breakdown in Table 22. We note first that the skewing of Chicano senior institution enrollment into Master's degree-granting universities is best explained by the concentration in the states of Colorado and Texas. Referring to Table 7, we see that these two states also have low parity ratios. Also, Arizona, the other state with a low parity ratio, joins Colorado and Texas in being the states where Chicanos representation in their most prestigious institutions remained the same or actually declined between 1974 and 1976. In Texas and Colorado, it

TABLE 17

Total and mean percent enrollment for 4 ethnic groups, by type of institution (II), 1972

	ETHNIC GROUPS								TOTAL N
	HISPANIC N	%	BLACK N	%	WHITE N	%	OTHER N	%	
Highest level of degree offered									
Associate's I	26363	9.2	22412	7.9	224869	78.8	11839	4.1	285483
Bachelor's II	1478	4.3	5683	16.5	26378	76.6	885	2.6	34424
Master's III	15780	9.3	7531	4.4	139357	82.1	6980	4.1	169648
Doctorate IV	19744	6.5	16484	5.5	254029	84.1	11769	3.9	302026

TABLE 18

Total and mean percent enrollment for 4 ethnic groups, by type of institution (II), 1974

	ETHNIC GROUPS								TOTAL N
	HISPANIC		BLACK		WHITE		OTHER		
	N	%	N	%	N	%	N	%	
I	49432	11.0	39400	8.7	344452	76.3	17930	4.0	451214
II	2336	6.7	4429	12.7	27048	77.7	1002	2.9	34815
III	18984	8.3	14692	6.4	188155	81.8	8087	3.5	229918
IV	23501	5.7	19565	4.7	353893	85.6	16295	3.9	413234

TABLE 19

Total and mean percent enrollment for 4 ethnic groups, by type of institution (II), 1976

	ETHNIC GROUPS								TOTAL N
	HISPANIC		BLACK		WHITE		OTHER		
	N	%	N	%	N	%	N	%	
I	61398	13.4	50381	11.0	312464	68.2	33937	7.4	458180
II	2578	5.6	6226	13.6	34776	75.7	2342	5.1	45922
III	23769	10.2	16216	6.9	176172	75.4	17531	7.5	233688
IV	29622	6.6	26152	5.8	358852	80.2	33017	7.4	447643

TABLE 20

Total and mean percent enrollment for 4 ethnic groups by state and type of institution (II), 1972

	ETHNIC GROUPS								TOTAL N
	HISPANIC		BLACK		WHITE		OTHER		
	N	%	N	%	N	%	N	%	
Arizona									
I	2151	11.9	731	4.1	14343	79.5	823	4.6	18048
II	*	-	-	-	-	-	-	-	-
III	18	3.6	11	2.2	465	91.7	13	2.6	507
IV	2276	5.5	728	1.8	37103	89.5	1359	3.3	41466
California									
I	16579	8.3	15741	7.8	158297	78.9	10012	5.0	200629
II	366	4.7	403	5.1	6745	85.9	335	4.3	7849
III	5769	5.2	6080	5.4	93515	83.7	6382	5.7	111746
IV	5521	6.0	5972	6.5	71641	78.4	8239	9.0	91373
Colorado									
I	1178	10.7	591	5.3	9055	82.0	225	2.0	11049
II	215	2.2	391	4.0	8776	90.8	280	2.9	9662
III	1305	11.1	222	1.9	10153	86.0	119	1.0	11799
IV	277	1.9	177	1.2	13766	94.6	337	2.3	14557
New Mexico									
I	316	15.1	64	3.1	1621	77.6	87	4.2	2088
II	450	33.4	59	4.4	732	54.4	105	7.8	1346
III	1848	30.0	194	3.1	3903	63.4	214	3.5	6159
IV	3107	16.2	288	1.5	15357	80.1	410	2.1	19162
Texas									
I	6139	11.4	5285	9.8	41553	77.4	692	1.3	53669
II	429	2.8	4819	32.0	9660	64.1	152	1.0	15060
III	6858	17.2	1035	2.6	31786	79.6	265	.7	39944
IV	8563	6.3	9319	6.9	116162	85.7	1424	1.1	135468

*Note: Arizona did not have any institutions which awarded only the Bachelor's degree.

TABLE 21

Total and mean percent enrollment for 4 ethnic groups by state and type of institution (II), 1974

	ETHNIC GROUPS								TOTAL N
	HISPANIC		BLACK		WHITE		OTHER		
	N	%	N	%	N	%	N	%	
Arizona									
I	3177	14.1	988	4.4	17552	78.1	771	3.4	22488
II	*	-	-	-	-	-	-	-	-
III	13	2.0	11	1.7	601	94.2	13	2.0	638
IV	1891	4.8	526	1.3	36093	91.5	944	2.4	39454
California									
I	33585	9.8	29850	8.7	264236	76.8	16231	4.7	343902
II	417	4.7	515	7.0	6054	82.1	384	5.2	7370
III	7683	4.7	9952	6.1	137247	84.6	7443	4.6	162325
IV	6663	4.6	7010	4.8	119407	82.3	12035	8.3	145115
Colorado									
I	554	7.4	293	3.9	6526	87.4	95	1.3	7468
II	580	5.1	471	4.1	10016	87.7	359	3.1	11426
III	1592	11.2	311	2.2	12108	85.2	204	1.4	14215
IV	1409	3.2	768	1.7	41170	93.3	756	1.7	44103
New Mexico									
I	540	17.7	124	4.1	2223	72.8	165	5.4	3052
II	761	34.2	94	4.2	1213	54.5	156	7.0	2224
III	1781	30.6	188	3.2	3597	61.9	246	4.2	5812
IV	3676	18.6	331	1.7	15141	76.7	587	3.0	19735
Texas									
I	11576	15.6	8145	11.0	53915	72.6	668	.9	74304
II	565	4.3	3338	25.4	9164	69.7	90	.7	13157
III	7928	16.7	4241	8.9	35203	74.0	194	.4	47566
IV	9862	6.0	10930	6.6	142082	86.2	1973	1.2	164847

*Note: Arizona did not have any institutions which awarded only the Bachelor's degree.

TABLE 22

Total and mean percent enrollment for 4 ethnic groups by state and type of institution (II), 1976

	ETHNIC GROUPS								TOTAL N
	HISPANIC		BLACK		WHITE		OTHER		
	N	%	N	%	N	%	N	%	
Arizona									
I	3924	14.1	1318	4.7	20959	75.3	1624	5.8	27825
II	*	-	-	-	-	-	-	-	-
III	122	4.0	98	3.2	2737	90.0	84	2.8	3041
IV	1864	4.1	694	1.5	40783	90.4	1750	3.9	45091
California									
I	36441	11.7	34139	10.9	214492	68.7	27306	8.7	312358
II	388	3.9	385	3.9	8139	82.7	925	9.4	9837
III	10564	6.6	10218	6.4	122345	76.9	16021	10.1	159148
IV	10519	6.6	9170	5.7	118270	74.1	21707	13.6	159666
Colorado									
I	1678	10.7	1055	6.7	12273	78.0	722	4.6	15728
II	720	5.6	687	5.3	10924	84.8	544	4.2	12875
III	1810	12.0	368	2.4	12472	82.7	427	2.8	15077
IV	1363	3.1	777	1.8	40719	92.5	1146	2.6	44005
New Mexico									
I	494	17.4	125	4.4	2030	71.4	196	6.9	2845
II	646	36.4	64	3.6	869	49.0	194	10.9	1773
III	1816	35.5	228	4.5	2818	55.1	254	5.0	5116
IV	5178	24.1	400	1.9	14949	69.5	978	4.5	21505
Texas									
I	18861	19.0	13744	13.8	62730	63.1	4089	4.1	99424
II	702	3.8	4992	27.1	12107	65.8	595	3.2	18396
III	9579	17.6	5402	9.9	38537	70.9	829	1.5	54347
IV	10698	6.0	15111	8.5	144131	81.3	7436	4.2	177376

*Note: Arizona did not have any institutions which awarded only the Bachelor's degree.

particularly appears that full-time undergraduate enrollment is being channeled into two-year colleges (Row I in the tables) and diverted away from the major research universities (Row IV).

The only significant variation in the black patterns of enrollment is in the state of Texas. In this state, there are a number of historically black four-year colleges which absorb much of the undergraduate enrollment. This accounts for their large share of the enrollment in these type (II) of institutions. It should also be noted that the black proportion in the Ph.D. - granting institutions unlike the Chicano proportion did increase from 6.6 in 1974 to 8.5 in 1976.

Table 23 presents a somewhat different perspective on distribution. We note that Chicanos as well as blacks are more likely to enroll in the major universities when they enroll in a four-year college. Also, their likelihood of enrolling in such colleges is about equal. By the same token, whites are considerably more likely to enroll in the most prestigious institutions. Moreover, that likelihood increased slightly during the period being studied. This is in contrast to the stability or slight reduction in the Chicano and black figures. We can conclude then that Chicanos and blacks are more likely to be diverted from the top of the academic hierarchy. That a majority of each group is enrolled in these institutions is best explained by the

TABLE 23

Percentage distribution of senior institution
enrollment for three ethnic groups, by
institutional type (II), 1972 - 1976

	HISPANIC			BLACK			WHITE		
	'72	'74	'76	'72	'74	'76	'72	'74	'76
<u>Highest Degree offered</u>									
Bachelors	4.0	5.2	4.6	19.1	11.4	12.8	6.3	4.8	6.1
Master's	42.6	42.4	42.5	25.0	38.0	33.4	33.2	33.0	30.9
Doctorate	53.4	52.4	53.0	56.0	50.6	53.8	60.5	62.2	63.0

fact that these most prestigious institutions also tend to be among the largest and enroll the majority of all full-time undergraduates.

In summary, the enrollment analysis by institutional type reveals that Chicanos are particularly underrepresented in four-year institutions. The analysis further showed that the modest increases in their participation are explained primarily by increases in two-year college enrollment. Chicanos, like blacks, are also disproportionately concentrated in two-year colleges. Fifty-two percent of all full-time Chicano undergraduates are in two-year colleges versus only a third of the white students. When considering the various types of four-year institutions, we found that Chicanos are being diverted from the most prestigious of these institutions, especially in some states. Moreover, these enrollment patterns appear to be getting increasingly stratified. The following section considers a further dimension of enrollment structures: grade level.

Analysis by Level of Enrollment

Analyzing enrollment by institutional type does not directly consider the grade level distribution of Chicanos and other groups. Students enrolled in two-year colleges may be equally distributed between the first two-years or may be concentrated in one grade or the other. Similarly, in four-year colleges enrollment can be distributed unevenly across four levels of enrollment. More importantly,

the distributions for one group may be significantly different than those for another. It is expected that all groups will enroll in decreasing numbers as one goes up the hierarchy. This section will explore whether and to what extent these patterns differ between groups.

The data presented in Tables 24 through 26 indicate that patterns of stratification between institutional types are also discernible when looking at distributions by level of enrollment. The Chicano percentage of the total enrollment decreases with each successive year (Table 27 summarizes the data for Chicanos). More importantly, we see in these tables one possible consequence of the concentration of Chicanos in two-year colleges. We note that the Chicano proportion of enrollment drops most sharply between the sophomore and junior years. Also, the drop between these two-years appears to be increasing. Tables 28 and 29 further illustrate that Chicano enrollment is disproportionately concentrated in the entry levels of enrollment. In 1976, 53 percent of all full-time Chicano enrollees were freshmen. Seventy-nine (79) percent were lower-division students. These distributions are considerably more skewed than the corresponding figures for whites. They also point to the association between level of enrollment and the enrollment by institutional types.

The figures in Table 30 illustrate this association more directly. This table considers freshmen and sophomores

TABLE 24

Total and mean percent enrollment for 4 ethnic groups by level of enrollment, southwest, 1972

	ETHNIC GROUPS								TOTAL N
	HISPANIC N	%	BLACK N	%	WHITE N	%	OTHER N	%	
Freshman	31497	8.9	25700	7.3	283565	80.1	13419	3.8	354164
Sophomore	15501	8.2	13846	7.3	152592	80.5	7670	4.0	189600
Junior	9071	6.9	6922	5.2	110513	83.7	5526	4.2	132024
Senior	7537	6.4	5738	4.9	99480	84.5	4918	4.2	117669

TABLE 25

Total and mean percent enrollment for 4 ethnic groups by level of enrollment, southwest, 1974

	ETHNIC GROUPS								TOTAL N
	HISPANIC		BLACK		WHITE		OTHER		
	N	%	N	%	N	%	N	%	
Freshman	51477	9.7	43045	8.1	417892	78.6	19393	3.6	531807
Sophomore	22929	8.5	18094	6.7	218273	80.9	10556	3.9	269852
Junior	10417	6.0	9177	5.3	147190	84.8	6868	4.0	173652
Senior	9471	6.1	7788	5.1	130297	84.6	6497	4.2	154053

TABLE 26

Total and mean percent enrollment for 4 ethnic groups by level of enrollment, southwest, 1976

	ETHNIC GROUPS								TOTAL N
	HISPANIC N	%	BLACK N	%	WHITE N	%	OTHER N	%	
Freshman	62484	11.5	55811	10.3	385934	71.0	39415	7.3	543644
Sophomore	30321	10.3	23673	8.1	218221	74.4	21025	7.2	293240
Junior	13148	7.2	10659	5.8	145905	79.5	13754	7.5	183466
Senior	11414	6.9	8832	5.4	132204	80.1	12633	7.7	165083

TABLE 27

Hispanic percentage enrollment changes for south-
western states, 1972 - 1976; by level of enrollment

	1972	1974	1976
Freshman	8.9	9.7	11.5
Sophomore	8.2	8.5	10.3
Junior	6.9	8.5	7.2
Senior	6.4	6.1	6.9

TABLE 28

Freshman enrollment as a percent of total enrollment for 3 ethnic groups, southwestern states, 1972 - 1976

	ETHNIC GROUPS		
	HISPANIC (%)	BLACK (%)	WHITE (%)
1972	50	49	44
1974	55	55	46
1976	53	56	44

TABLE 29

Lower division enrollment as a percent of total enrollment for 3 ethnic groups, southwestern states, 1972 - 1976

	ETHNIC GROUPS		
	HISPANIC %	BLACK %	WHITE %
1972	74	76	68
1974	79	78	70
1976	79	80	68

TABLE 30

Percentage distribution of Freshman and Sophomore enrollment for three ethnic groups by institutional type, southwestern states, 1976

		ETHNIC GROUPS		
		HISPANIC (%)	BLACK (%)	WHITE (%)
<u>FRESHMEN</u>	2-year COLLEGES	70	67	57
	4-year COLLEGES	30	33	43
<u>SOPHOMORES</u>	2-year COLLEGES	58	56	43
	4-year COLLEGES	42	44	57

separately and breaks down the 1976 enrollment by institutional type. It can be seen that Chicano freshmen and sophomores are much more likely to enroll in two-year colleges than their white peers. Fully seventy percent of Chicano freshmen were enrolled in junior colleges. This compares to 57 percent of the white freshmen. Chicano sophomores were also more likely to be attending a two-year college. In fact, by the time a white student is a sophomore he or she is more likely to be attending a four-year college. It should also be emphasized here that the data under consideration is exclusively for full-time students. This controls for those students from one group or another who may tend to have part-time status and thus may tend to enroll in a community college. The magnitude of differences is cause for concern because it indicates the extent to which full-time Chicano students are channeled into two-year colleges.

The analysis of Chicano enrollment by level of enrollment again points to a stratified pattern of participation. This section brought to light two major findings:

- (1) The sharp decline in the Chicano proportional share of enrollment between the sophomore and junior years, and
- (2) the disproportionate number of Chicano freshmen and sophomores enrolled in two-year colleges. The juxtaposition of these two findings strongly suggests their association. It is apparent that Chicanos are being tracked into

the junior colleges and are being 'cooled out' there. The only finding that could suggest otherwise is one that showed they were attaining a disproportionately high share of two-year degrees. Their attrition after the sophomore year precludes, of course, the attainment of any higher credential or job requiring advanced certification. The next section will examine data on degree attainment and consider their association to the findings on enrollment.

Analysis of Degree Attainment Data

The comprehensive analysis of Chicano undergraduate enrollment has revealed a very stratified pattern of participation. We have noted that the higher one goes up the academic hierarchy, the less the likelihood that Chicanos will be participating in equitable proportions. A final measure is required to move toward a full understanding of participation. This is one which investigates the outcomes derived from the type of enrollment patterns discerned in the foregoing analyses.

Table 31 presents basic degree attainment breakdowns for southwestern colleges and universities. We see that Chicanos attained 10.1 percent of the associate's degrees and 6.2 percent of the bachelor's degrees awarded in the academic year 1975-76; i.e., between July 1, 1975 and June 31, 1976. Before considering the relationship of these to enrollment data, we will look at how bachelor's degree awards were distributed by the various types of four-year

TABLE 31

Total and mean percent degrees awarded to
4 ethnic groups, southwest, 1975 - 1976

	ETHNIC GROUPS								TOTAL N
	HISPANIC		BLACK		WHITE		OTHER		
	N	%	N	%	N	%	N	%	
Associates	4974	10.1	3458	7.1	37897	77.3	2720	5.5	49049
Bachelors	10067	6.2	7495	4.6	133537	82.2	11345	7.0	162444

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institutions discussed in earlier analyses.

Four-year institutions were classified by the highest level of degree offering: a bachelor's degree, a master's or first professional degree, and the doctorate. The breakdowns are found in Table 32. We see a familiar pattern here. It is not surprising to learn that master's degree-granting institutions are where Chicanos are attaining the highest proportion of degrees. The enrollment data cited earlier showed that these institutions are where they are best represented. We saw in Table 18 that Chicanos represented, in 1974, 6.7, 8.3, and 5.7 percent of the enrollment in the three types of institutions. This does not compare that poorly with the figures of 5.1, 7.8, and 5.4 for degree attainment in the respective types. One thing that can be noted is that they are better as one goes up the hierarchy. Table 33 data can be compared similarly with data presented in Table 21. These figures illustrate the distribution of each group's degrees by the type of institutions. This distribution is again very similar to the enrollment distribution. We note that, like in enrollment patterns, although Chicanos are better represented in master's degree-granting universities, more Chicanos (as with all groups) are graduating from the most prestigious institutions.

We see then that the proportion of degrees earned by Chicanos is not much less than the enrollment proportions. They are lower, to be sure, but perhaps not as low as

TABLE 32

Total and mean percent Bachelor's degrees
awarded 1975-1976, by type of senior institution

Highest Degree Offered	ETHNIC GROUPS								TOTAL N
	HISPANIC		BLACK		WHITE		OTHER		
	N	%	N	%	N	%	N	%	
Bachelors	425	5.1	994	11.9	6710	80.1	245	2.9	8374
Masters	4396	7.8	2759	4.9	44871	79.8	4209	7.5	56235
Doctorate	5246	5.4	3742	3.8	81956	83.8	6891	7.0	97835

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TABLE 33

Percentage distribution of Bachelor's degrees earned
for three ethnic groups, by type of senior institution

	ETHNIC GROUPS		
	HISPANIC (%)	BLACK (%)	WHITE (%)
<u>Highest Degree Offered</u>			
Bachelors	4.2	13.3	5.0
Masters	43.7	36.8	33.6
Doctorate	52.1	49.9	61.4
All Institutions	100	100	100

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might have been predicted given the sharply stratified patterns of enrollment. It will be instructive to pursue one further comparison of the graduation data with enrollment data. We wish to compare the graduation figures for the 1975-76 academic year with the figures for junior enrollment in 1974. It would be expected that normal progress for 1974 juniors would make them members of the class of 1976. In doing the following analysis, however, we must note we are making maximum use of the available data. Two factors call for exercising more than the usual caution in interpreting the next three tables. First, the data for 1974 enrollment is for full-time students only, whereas the degree data includes all recipients. Arguably, part-time 1974 juniors would not be expected to complete a degree in 1976. Secondly, 1974 juniors may or may not have been enrolled in four-year degree programs. There is nothing to suggest, however, that either of these considerations would affect any ethnic group more than the other. Accordingly, the ethnic ratios should be fairly comparable and make comparisons fairly reliable.

Table 34 compares the 1974 junior enrollment proportions of the three ethnic groups with their proportions of bachelor's degrees attained in 1975-76. It is surprising and noteworthy that the Chicano proportion of degree attainment exceeds their enrollment proportion. This was not the case when associate's degree data was compared to two-year

TABLE 34

Comparison of 1974 Junior enrollment to
Bachelor's degrees attained in 1975-1976
for three ethnic groups

	ETHNIC GROUPS		
	HISPANIC N	BLACK N	WHITE N
1974 Junior enrollment (A)	10417	9177	147190
1975-1976 Bachelor's degrees (B) attained	10067	7495	133537
Ratio of degrees attained to 1974 Juniors enrolled (B)/(A)	.97	.82	.91

NOTE: Enrollment data is for full-time students only whereas degree data includes all recipients.

college enrollment. In fact, this is the first exception to the clear stratified patterns seen to this point. Exploring this finding further, we have calculated a ratio utilizing the absolute figures for enrollment and graduation. This calculation is presented in Table 34. We see that the ratio of degrees attained to the enrollment figure is actually higher for Chicanos than for the other groups. The caveats cited above notwithstanding, these data certainly indicate a lower attrition rate for Chicanos after the junior year. This finding would corroborate Alexander Astin's finding reviewed earlier that within four-year colleges, Chicanos drop out at a rate lower than whites.¹

A breakdown of these ratios by state in Table 35 illustrates that the figure for Chicanos is consistently high. It is equal to or higher than the white ratio in four of the five states. Again, this degree of consistency is uncharacteristic of any enrollment patterns examined earlier. Hypothesized enrollment relationships have mostly been confirmed by the analyses. The hypothesis that must be rejected is that the Chicano proportion of upper level enrollment is higher than the proportion of degrees earned.

As to questions of attrition and retention, the data indicate that there is considerable attrition between the sophomore and junior years. However, from the junior year on, Chicanos tend to do as well or better than other groups.

TABLE 35

Comparison of 1974 junior enrollment to bachelor degrees
attained in 1975-1976 for three ethnic groups, by state

	1974 Junior Enrollment	1975-1976 Bachelors Degrees	Percentage of 1974 Juniors Earning Degrees
<u>Arizona</u>			
Hispanic	506	459	91
Black	127	111	87
White	8786	8324	95
<u>California</u>			
Hispanic	4253	3968	93
Black	5213	3806	73
White	79014	66281	84
<u>Colorado</u>			
Hispanic	607	591	97
Black	320	273	85
White	13262	12928	97
<u>N. Mexico</u>			
Hispanic	1134	1093	96
Black	121	107	88
White	4184	3610	86
<u>Texas</u>			
Hispanic	3917	3956	101
Black	3396	3198	94
White	41944	42394	101

It has also been demonstrated that the drop-off at the junior year is closely associated with the extent of Chicano concentration in junior colleges. Chicanos are not earning a disproportionate number of associate's degrees; such a finding would have indicated that they are opting for a two-year degree and voluntarily ending or suspending their education. It appears instead that they are either being 'cooled off' in the junior colleges, or they are experiencing an inordinate amount of difficulty in transferring to the four-year colleges.

In any case, the findings clearly point to the importance of considering the distribution of a group's enrollment as problematic. Certainly we have seen that relatively high levels of community college enrollments do not lead to comparable levels of degree attainment. If one accepts that educational credentials are increasingly important to gain entry to the upper part of the occupational structure, then there is cause to believe that the present systems of access are not enhancing the occupational prospect of Chicanos.

FOOTNOTE TO CHAPTER IV

¹Alexander Astin, Preventing Students from Dropping Out, (San Francisco: Jossey-Bass, 1975), p. 37.

CHAPTER V
SUMMARY OF FINDINGS AND THEIR
IMPLICATION FOR EDUCATIONAL POLICY

Summary of Findings

The analysis of enrollment data in Chapter IV illustrates, most fundamentally, that Chicanos are underrepresented in colleges and universities of the southwest. Their proportional share of full-time undergraduate enrollment is considerably less than their proportion of the population in this region. The analysis further indicated that they are less well represented than either blacks or whites.

Moving beyond these aggregate assessments, we found even greater measures of inequality in noting sharply stratified patterns of Chicano participation. When they do gain access to higher education, Chicanos are much more likely than whites, and slightly more likely than blacks, to enroll in two-year colleges — the least prestigious institutions in the academic hierarchy. This heavy concentration in two-year colleges contributed heavily to the finding that Chicano enrollment proportions drop sharply between the sophomore and junior years. The emphasis on proportional measures permitted one to distinguish between an absolute reduction in enrollment

throughout the undergraduate years which all groups experience and the disproportionate reduction which Chicanos experience.

The data presented in the last chapter further indicates that parity representation for Chicanos in higher education is approached only in the two-year colleges. The levels of representation in four-year colleges are dismal indeed. Only the state of New Mexico, a state which does not have a significant two-year college system, varies from this structural pattern, albeit its aggregate figures do not approach parity levels either.

The comparison of available degree attainment data with enrollment figures illustrated that beyond the sophomore year and the junior college level, Chicano persistence (though still not representation) compares well with other groups. Their share of bachelor degrees conferred is comparable to their share of upper-level enrollment. A more focused analysis of enrollment and graduation data from four-year colleges, however, disclosed a further dimension of stratification. Chicanos are least well represented in the most prestigious of these institutions - the major research universities which grant the doctorate. To the extent that employers, and graduate and professional schools make these distinctions in recruiting and admitting candidates, the post-baccalaureate chances of Chicano graduates may vary accordingly.

Interpretations and Implications: The Contradiction of
Access

Public policy in the area of equity in higher education has been guided to considerable degree by the argument that increasing the accessibility of institutions will lead to the equitable participation of previously excluded groups. Access has been achieved in most areas through the construction of expansive systems of community colleges. These 'second-chance' institutions have been assigned the task of equalizing opportunities in higher education.

The first chapter provided an interpretation of the expansion of the higher educational structure. It was argued that the expansion resulted in a sharply hierarchical system characterized by a clear division of academic labor. The increased demand for higher education permitted four-year institutions to become increasingly selective. It was the new two-year colleges which were charged with the task of extending an 'equal opportunity' to the 'non-traditional' students. Our analysis has illustrated how well community colleges in the Southwest are providing 'access' to Chicanos. It further illustrates how access is limited to the lower levels of the academic structure. The provision of access to Chicanos and other minorities can be interpreted myopically as a progressive policy initiative on the part of colleges and universities. However, assigning the role of educating these 'new students' to institutions at the bottom of the status hierarchy reveals the conservative nature of

such policies. The creation and maintenance of what is euphemistically called "diversity" in higher education offerings represent policies designed to buttress current structures of educational and social inequality.

Current hierarchical models of access which provide unequal access to unequal sectors of higher education lead to unequal outcomes. The distribution of Chicano enrollment in the Southwest brings into question the global issue of equal educational opportunity. Are Chicanos being afforded an equal opportunity if their participation in higher education is systematically limited to certain institutional types and academic levels and if this distribution, in turn, is working against their likelihood of completing a bachelor's degree? The data analyzed in this study hardly suggests an equitable model of participation. It points instead to a stratified model of access which uses admissions practices, tuition structures, and geography to sort and group students on the basis of background characteristics and presumed vocational destinations.

Chapter I argued that one of the factors leading to an academic division of labor is an anachronistic vision of the university as an autonomous academy dedicated to the pursuit of excellence and the practice of scholarship. To the extent that the universities assume the responsibility of certifying an increasing range of the labor force, they forfeit their claim to autonomy and their right to set arbitrary requirements for access to their rewards. The

role of higher educational systems in rationalizing the labor market similarly renders illegitimate their role as arbiters of educational opportunities and life chances. The individual's access to the credential system must be considered a political right rather than a privilege. As such, the question of access becomes a political as much as an educational question.

Current models of access which engender the stratified patterns of participation we find in the Southwest must be reevaluated. The present educational hierarchies are designed to frustrate rather than promote the educational aspirations of Chicanos and other minorities. These students rely on higher education as one of the few options available for getting ahead in an 'open society'. Less hierarchical systems which eliminate the sharp attrition rates between the sophomore and junior years must be designed. Current stratified systems which reproduce rather than reduce inequality are antithetical to the development of an institution which claims to promote educational and social equity.

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